Chronic pain recovery: a physiotherapy journey to celebrating the mindbody approach

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This article follows a reasoned account of a path through the physiotherapy profession, riding its ups and downs, to the current point of embracing a greatly needed and enjoyable role, guiding clients to relief and recovery from chronic pain using the evidence-based mindbody approach of Stress Illness Recovery Practitioners Association (SIRPA™) and interweaving a supportive and self-reflective coaching style.

LEARNING OUTCOMES
TO SUPPORT PHYSIO FIRST QAP

1 Illustrate an evolving career path that incorporates the ever-growing evidence from psychophysiologic neuroscience.
2 Demonstrate the mindbody approach to chronic pain as a specialised branch of physiotherapy.
3 Identify the patterns of symptoms that indicate a client may have a psychophysiologic disorder (PPD) and therefore one from which they may recover.
4 Outline the evidence-based strategies to relief and recovery utilised by the mindbody approach of SIRPA™.

Introduction

"Pain changes a person; changes their mood, changes their personality, changes their relationships, changes what they can do, changes who they are. It takes over their life." These were the words my father spoke to me when I was a teenager. As a biomedical engineer, he had attended an invasive brain operation to help a female patient find relief from devastating chronic pain.

EARLY YEARS

Ten or so years later, in the 1990s as a young NHS physio rotating through neuro at the Royal Free Hospital, London, I was fascinated by neuroplasticity and the brain's ability to change and adapt. The fact that neurones were continuously growing and adapting with new dendrites and new synapses, or withering from disuse as they connected, disconnected and reconnected with millions of others, just blew my mind.

When I moved into musculoskeletal (MSK) physiotherapy, I received an excellent postgraduate training programme from Musculoskeletal Association of Chartered Physiotherapists (MACP) specialised seniors, and my ongoing intrigue in the insidious onset of pain deepened during my next two hospital MSK senior roles at Poole and then Portsmouth hospitals. I wanted to know what hidden physical manifestations were creating the circumstances to produce pain.

Research had been emerging about muscle imbalance, the impacts of pain and the deeper core muscles of the back, abdomen and pelvis (Panjabi 1992). The focus of MSK physiotherapy was deepening into the analysis of movement and retraining fine motor control around the spine, the shoulder, the hip, knee and foot. Finely graded and charted passive mobilisations from Maitland (1992) seemed to compete with the active repeated movements of McKenzie (1983, 1990) and the manual techniques of the Society of Orthopaedic Medicine (Kesson & Atkins 1998), now the Society of Musculoskeletal Medicine (SOMM), with Mulligan (1995), and myofascial release. The expanding understanding and assessment of neurodynamics entwined with most methodologies (Butler 1991) and all were able to theorise the success of their methods using anatomy, physiology and clinical reasoning.

With this foundation I became a true physical and exercise therapist seeking out the physical reasons for why a person might be in pain, but the caveats of yellow flags (Kendall *et al* 1998) were always in my mind. The influence of psychosocial factors on pain, behaviours and recovery from injury were important and were talked about, but at that stage they weren't a formal part of my physical therapy work.

While most patients improved, I struggled to see the patterns in why one person with a certain pain, muscle, posture and movement presentation improved, when someone with a similar set of signs and symptoms didn't. I attended courses, did my best to keep up to date and to apply my new learning and skills to clients, yet I was losing faith in physiotherapy and so, for a few years, I left the profession to focus on my family.

A change in understanding

Part of my return to practice training was with The Series by LJ Lee (2014) and Douglas Heel and his Be Activated method (2014-2015). Although widely different, both regimes assess and treat the body as an interacting whole unit and notably incorporate the roles of emotional, cognitive, social and contextual factors. Douglas' demonstration of the effect of mindset, visualisation and even vision on immediate measured strength and flexibility is fascinating and this hugely sparked my interest in the mindbody approach.

Subsequently, *In Touch* featured an article by Georgie Oldfield (2015) entitled "Chronic pain: recovery not 'management'?" and this really resonated with me; maybe this was the missing piece in the jigsaw that I'd been searching for.

Oldfield (2015) highlighted the research where lumbar MRI of asymptomatic volunteers with an average age of 45 showed 60% had disc bulges, 45% protrusions, 76% annular fissures (Kim 2013) and that "we should not assume that spinal degeneration is the cause of pain…" She also described an article by osteopath Eyal Lederman (2010), who had reviewed 20 years of studies examining the relationship between pain and posture, structure and biomechanics, and had found no correlation. Alongside this, Castro *et al* (2001) had shown it was possible to predict, from psychological profiling, who might develop pain post incident, and Lumley *et al* (2011) had reviewed the biopsychosocial research and concluded that emotions are integral to the assessment and treatment of persistent pain.

Oldfield had worked with Dr John Sarno, Professor of Rehabilitation Medicine at the New York University School of Medicine, who had previously determined that an individual's response to psychosocial issues could be the actual cause of their condition and the fuel for their pain. In other words, tissue damage or strain are not necessary in order to feel physical pain, and repressed emotions alone can create and / or maintain pain felt in the body (Sarno 1991, 1998; Quartana & Burns 2007; Wiech & Tracey 2009).

Evidence was expanding to support Sarno's and Oldfield's approach (Schechter *et al* 2007) and our broader understanding of pain, including the strong link between adverse childhood experiences (ACEs) and chronic pain and ill health in adulthood (Felitti *et al* 1998; Goldberg 1999; Jones *et al* 2009; Kessler *et al* 2010; Sachs-Ericsson *et al* 2017), with cumulative past traumatic events, depressed mood and negative pain beliefs being the most predictive for transition from acute to chronic pain and disability (Young Casey *et al* 2008). Additionally, functional magnetic resonance imaging (fMRI) scans of those suffering with chronic pain showed activity shifting to the deeper emotion centres of the brain (Kulkarni *et al* 2007; Hashmi *et al* 2013).

Also inspired by the work and personality of Lorimer Moseley, with his passion for understanding pain through research, I found his words, "Pain is produced by the brain 100% of the time – without exception", to be foundational. I devoured *Explain Pain* (Butler & Moseley 2014), *The Protectometer* (Butler & Moseley 2015), and his excellent book *Painful Yarns* (Moseley 2007). They helped me to understand how the brain relies on our subconscious beliefs, thoughts, emotions, knowledge and past experiences to help make its evaluation of the danger we and our body may be in. We perceive pain to motivate us to act and protect ourselves, including when thoughts, fears or beliefs of danger and threat are misinformed.

The SIRPA™ approach

Emotions can generate pain. Bayer *et al* (1998) conducted experiments with a fake dial connected to a fake "stimulator helmet" and observed when volunteers wearing the helmet watched the dial being turned up, they started to feel pain in their heads. The machine was inert, but the perceived threat caused them to feel pain. Moseley includes this research in his 2017 Pain Revolution video (**https://www.youtube.com/watch?v=nifGFIuVkUk&ab_channel=PeopleinPainNetwork**) which can be a great tool to show patients.

Georgie Oldfield gathered evidence both from our neuroscientific understanding of pain and for the growing number of strategies that have become the foundations for the mindbody approach to relief and recovery from chronic pain and other stress-induced health symptoms (Schechter *et al* 2007; Hsu & Schubiner 2010; Burger 2016). Georgie Oldfield set up SIRPA™ because of her passion for training health professionals in this groundbreaking field of medicine and today it is an organisation that is rapidly expanding in numbers and in reliable clinical evidence to back up its mindbody teachings. A multitude of successful and happy clients whose lives have been returned to them, many of whom have given interviews for public viewing, fill the SIRPA™ archives, webpages and social media channels (**www.SIRPA.org**).

SIRPA™ remains closely linked with its sister organisation, the USA-based Psychophysiologic Disorders Association (PPDA), which continues to share the lead with research trials and presenting the work and evidence in articles, books, courses and conferences (**www.PPDAssociation.org**).

> "PAIN MOTIVATES US TO ACT AND PROTECT OURSELVES EVEN WHEN THOUGHTS, FEARS OR BELIEFS OF DANGER ARE MISINFORMED"

RECENT SUCCESSES

In the Ashar *et al* (2022) randomised controlled trial, 50 of a total of 151 participants who had had a mean duration of 10 years of back pain were randomised to receive eight sessions of Pain Reprocessing Therapy (PRT) over four weeks. Patients receiving PRT reported substantial reductions in pain intensity compared with the control groups, with 66% becoming pain-free or nearly pain-free (0/10-1/10 on a VAS score) post treatment. This compared with only 20% in the open label placebo group and 10% in the usual care group. Even if not nearly pain-free, 70% of those in the PRT group had a 50% reduction in their pain post treatment and no participant's pain in this group was recorded as worsening, whereas pain in a small number had worsened in both the control groups. Significantly for the scientists, fMRIs of brain function taken both before and after the trial showed notable changes in pain-related activity for PRT vs placebo or usual care, and significantly for the participants, improvements in the PRT group were largely maintained at one-year follow-up.

Donnino *et al* (2021) undertook a pilot study of chronic back pain and found similar results in that 64% of participants receiving their 12-week mindbody treatment approach remained pain-free (0/10) at 26 weeks.

These studies add to the growing scientific understanding around the specifics of neuroplasticity and the influence of beliefs, thoughts, emotions, knowledge and past experiences on the perception of pain, which is the focus of a mindbody approach.

Explaining a psychophysiologic disorder

Often referred to as chronic pain, TMS (from its earliest term of Tension Myositis Syndrome), persistent pain, learned pain, neuroplastic pain, or mindbody pain, psychophysiologic disorder (PPD) is a physical condition or pain that develops in response to stress, trauma and other psychosocial factors. These mindbody symptoms can affect almost any structure, organ system or region of the body.

Symptoms are a manifestation of unresolved emotional turmoil, e.g. past, repressed and / or avoided in the present, and are part of our primal and protective stress response. Neural circuits become learned and sensitised. Through pain neuroscience we know these neural pathways are neuroplastic and so can be changed (SIRPA™ 2022).

Assessing for PPD

- When a client's symptoms have persisted for more than three months and infection, fracture, cancer, cauda equina syndrome or an autoimmune disease have been ruled out by their medical team, we can consider the symptoms to be most likely due to persistently active neural circuits in the brain and nervous system, part of the primal, protective and hypersensitised stress response.
- SIRPA™ practitioners ask clients to complete an extended assessment form, inquiring into potential stress-related traits, habits and common life-stressors both past and present.
- The client is asked to reflect on personality traits which can add pressure to perceived stress, the sense of being overwhelmed and pain (Castro *et al* 2001; Gracely *et al* 2004). These can include, for example, perfectionism, being driven, competitive, conscientious, being overly analytical, needing to feel in control or to be right, being a people-pleaser, over-giver or being anxious.
- The form describes a list of symptoms that are often stress-induced, and it is common for clients to highlight a number of these co-existing in their present and past. Irralee Andrzejowska, my SIRPA™ colleague, referred to this list in her article in the winter 2021 edition of *In Touch* (Andrzejowska 2021).
- Clients are guided to create a timeline, to review their history of potential stressors noting traumas, losses and life pressures that they may have suffered since birth. These are the times when they felt traumatised, isolated, unsupported or just not good enough for the significant people around them. Clients are then steered to observe links to any health symptoms and pains which they were suffering at the time of the stressors.
- Clients are encouraged to review current responsibilities that may be generating emotions such as shame, resentment, embarrassment, anger, guilt or fear.
- Clients are invited to outline the personality traits and relationships they had / have with their parents or main caregivers, as these can contribute enormously to underlying emotions. Similarly, reflecting on siblings and children they care for can help to establish where they might be harbouring, often subconsciously, underlying stress and tension.
- I complete my assessment process with the inclusion of the Brighton University Musculoskeletal Patient Reported Outcome Measure (BmPROM), together with the PHQ-9, GAD-7 questionnaires to establish levels of anxiety, depression and general wellbeing.

An example of my own experience with mindbody pain

While I was compiling my own timeline during my SIRPA™ training, I fully locked into accepting the mindbody approach to understanding pain. Prior to training as a physio, I gained a degree in law but I realised in my very first law lecture that the subject wasn't for me. However, not wanting to be defeated (a stress-inducing personality trait), and loving the social life, I persevered.

The first year of my law studies was a relative doddle, but as the work became harder I experienced recurrent, irregular and horrendous abdominal pains. Despite hospital admissions and undergoing numerous tests, no medical cause could be found, but the moment I finished the degree and my involvement with law, the abdominal pains ceased. This experience alone proved to me that emotional stress has a huge influence on creating physically felt pain.

GUIDING RECOVERY USING THE SIRPA™ APPROACH

SIRPA™ practitioners include physiotherapists, osteopaths, chiropractors, psychotherapists, doctors and health coaches, all of whom incorporate the evidence-based strategies of the mindbody approach into their individual professional training and experience, and carry it out under the governance of the profession they are registered with. As I felt I needed to deepen my understanding of the important role personal boundaries and self-care play in emotional turmoil, I trained with the Levin Life Coach Academy (LLCA 2020; Levin 2020). Following a similar self-reflective format to life coaching and, in line with the body of recommended best practice (Lin *et al* 2020; NICE 2021), I curated a structured 10-step programme to guide my clients through the many elements of the mindbody approach of SIRPA™. These include:

1. Exploring with the client how their symptoms follow the common patterns we see with a PPD (figure 1).
2. Teaching important skills such as pausing to encourage a slow, coherent breathing pattern (HeartMath.com), visualisations (Pascual-Leone 1995; Ranganathan 2004), simple expressive writing (Pennebaker & Smyth 2016), Havening (Havening.org; Harper 2012), gratitude and kindness practice (Hamilton 2018, 2019), practices known to emphasise safety (Dana 2018; Caneiro *et al* 2022), and reinforcing the need for focused self-care and compassion.
3. Highlighting basic pain neuroscience (Moseley 2021; Smith *et al* 2019), re-educating misinformed beliefs about the fragility of the body (Caneiro *et al* 2022), emphasising the anomalies between MRI scans and symptoms (Karppinen *et al* 2001; Elliott 2010; Kim 2013; Brinjikji *et al* 2015; Nakashima *et al* 2015; Connor *et al* 2003; Girish *et al* 2011; Kaplan *et al* 2005; Culvenor *et al* 2018; Silvis 2011; Frank *et al* 2015; O'Neill *et al* 2016), and underlining how psychological and emotion factors are the predictors of chronic pain rather than physical factors (Fisher *et al* 1995; Goldberg 1999; Feyer 2000; Castro *et al* 2001; Young Casey *et al* 2008; Lederman 2011; Christensen 2012; Hashmi *et al* 2013; Eisenberger 2015).
4. Outlining the Polyvagal Theory which helps patients in their understanding of safety versus danger and how their autonomic nervous system responds (Dana 2018, 2020; Jamieson *et al* 2013). This is followed by developing emotional awareness (Hsu *et al* 2010) to help uncover and safely express repressed emotional turmoil. Clients are carefully shown how to observe somatic sensations, with reassurance and without judgement (Burger 2016; Lumley *et al* 2017).
5. Expanding the steps to effective journaling (Baikie 2012; Pennebaker & Smyth 2016) including the use of mind maps, taking care to rationalise, gain perspective and consider forgiveness (Luskin 2003).
6. Highlighting the benefits and forms of meditation and mindfulness (Khoury *et al* 2013; Elder 2014; Goyal *et al* 2014; Berkovich-Ohana *et al* 2015; Garland *et al* 2020; **www.TM.org**).
7. Encouraging clients to ensure they take care of their mental, emotional, physical and spiritual needs on a daily basis through the use of SIRPA's™ House of Health (SIRPA 2022) (figure 2).
8. Investigating how to soften personality pressures and self-induced stresses. Becoming aware of thought gremlins, misbeliefs, noticing triggers and considering how to respond differently, letting go where possible (Oldfield 2019; SIRPA 2022). Introducing the important role of setting boundaries to control emotional distress (Levin 2020).
9. Delving deeper into triggers and how clients can use breathing, emotion awareness, affirmations (Cooke *et al* 2014; Critcher & Dunning 2014; Cascio *et al* 2015) and visualisations to rewire their neural circuitry and prepare for more comfortable movement and function.
10. Revisiting ongoing fears with rationalisation and reframing techniques (Jamieson *et al* 2013; Oldfield 2015), as well as guiding clients on how to follow a measured return to physical activities and function (Butler & Moseley 2014; Vanti *et al* 2019; Smith *et al* 2019).

SYMPTOM ONSET

- **Commenced around a very busy / difficult time in their life**
- **Persisted after any injury would have healed, 6-12 weeks**
- **Started after a simple activity usually done without problem, e.g. turning over in bed**
- **Recurred at an old injury site**
- **History of adverse childhood experiences and / or dysfunctional family unit**

PERSISTENCE

- **Unexplained by diagnostic tests and investigations**
- **Unresolved despite many other treatments / modalities**
- **Ongoing presence of anxiety, depression or PTSD**
- **Presence of stress-inducing personality traits, beliefs or behaviours**

SYMPTOM PATTERN

- **Absent with activity or exercise but occurs later in the day or the next day**
- **Moves from place to place, i.e. new symptom occurs when another symptom settles down**
- **A specific activity, place, person, time of day, day of week, smell or sound triggers symptoms. This is conditioning – a trained response which can be unlearned**
- **Imagining / thinking of an activity, movement or a certain situation triggers symptoms**
- **Occurs or worsens when stress levels increase**
- **Better when engaged in a joyful or distracting activity (and on holiday)**
- **Improves with the following:**
  acceptance of the mindbody explanation
  after starting to express unresolved emotional turmoil (verbally or in writing)
  or after use of another strategy known to help mindbody pain

FIGURE 1: Table listing symptom onset, persistence and patterns related to PPD (SIRPA 2022; Clarke *et al* 2019)

Conclusion

Science is uncovering so much about the complexities of pain and its links with emotions. With the widespread prevalence of chronic pain in the UK (Fayaz *et al* 2016; NICE 2021) and the evolving research behind the mindbody

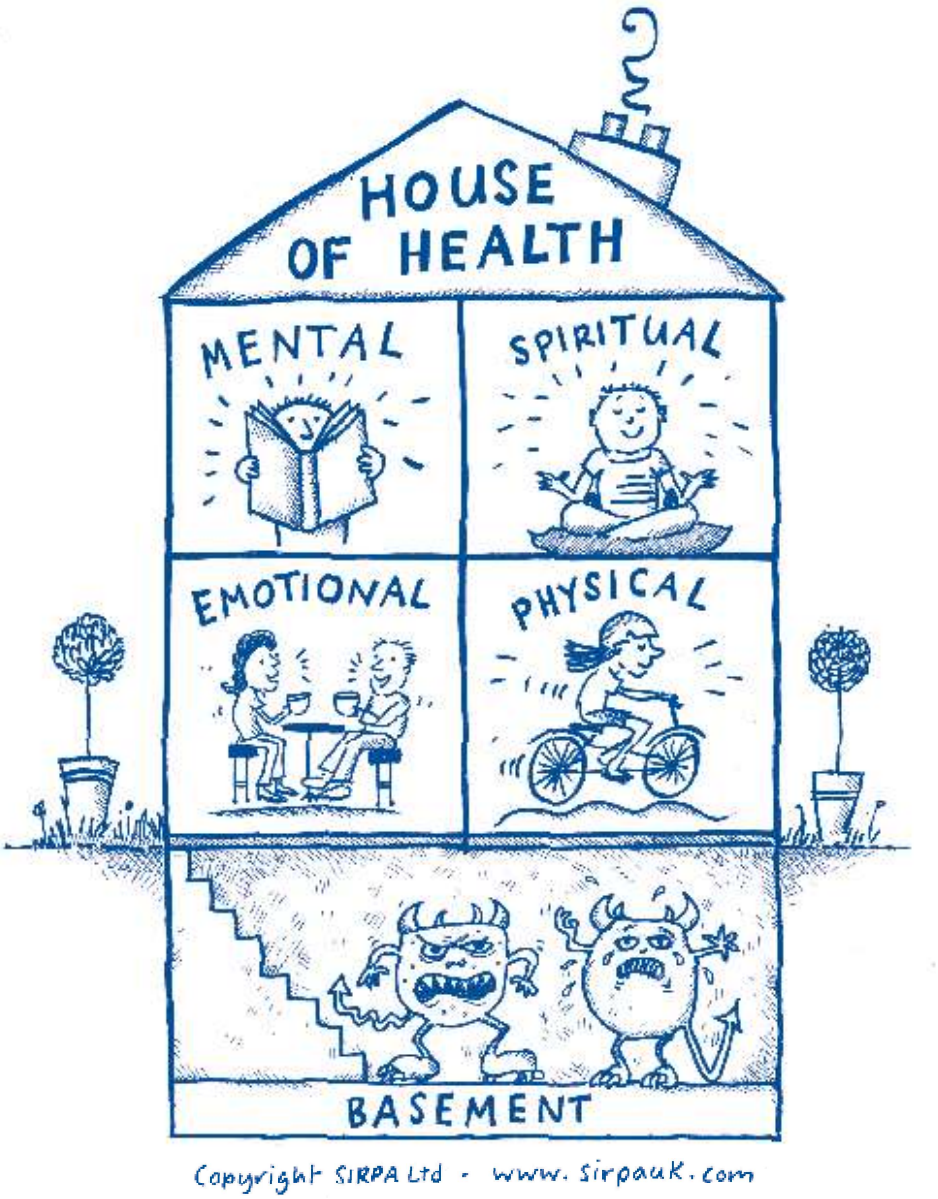

FIGURE 2: House of Health (SIRPA 2022)

approach, I would almost feel fraudulent were I not guiding clients with the SIRPA™ approach. I'm so glad to be supporting clients to embrace these relatively simple and non-invasive strategies. Those who've been suffering and struggling for so long may now work towards relief and often recovery from their symptoms, finally empowering them to take back control of their lives.

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About the author

Catherine has worked as a musculoskeletal physiotherapist since graduating from St Thomas' Hospital in 1992. She set up her own private practice, PhysioConnect, in 2015 and has now moved her work in this exciting and evolving field of mindbody therapy to an online clinic, allowing her to guide and support clients from around the world towards relief and recovery from their chronic pain.

Resources

- www.havening.org
- www.HeartMath.com
- www.nancylevin.com/levin-life-coach-academy
- www.noigroup.com
- www.ppdassociation.org/resources
- www.SIRPA.org
- www.TM.org
- www.youtube.com/watch?v=nifGFIuVkUk&ab_channel=PeopleinPainNetwork

REVIEW SUPPORTING QAP

Catherine's excellent article outlines how musculoskeletal physiotherapy has evolved from the 80s and 90s when "gurus" such as Maitland, McKenzie, Cyriax and Mulligan sought physical reasons to explain why patients were in pain, but physios often remained unable to understand fully why some patients did not improve with physical treatments.

The article highlights how the SIRPA approach draws upon evidence that chronic pain is a psychophysiologic disorder (PPD) that develops in response to stress, trauma and other psychosocial factors, and has symptoms that can affect any structure, organ or region in the body.

The fact that Catherine outlines how she was inspired towards the mindbody approach in 2015 after reading Georgie Oldfield's article in our journal, *In Touch*, indicates how Physio First has always explored ways in which we can achieve the best outcomes for our patients. Evidence for the SIRPA method is further supported by the fact that the patient assessment includes the Brighton PROM (BmPROM) which is an independent validation tool used as part of our Physio First DfI and QA schemes.

Catherine describes the treatment techniques she uses with her patients through her own curated 10-step programme and that, together with the option for further SIRPA training, offers us the tools to incorporate the mindbody approach into our own practice.

Reviewer
Jill Drew

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